

US EPA ARCHIVE DOCUMENT

Study Validation

Reviewer: R. Balcomb

Date: 11/18/80

1. Chemical: Permethrin
2. Purity: 97% (¹⁴C - Permethrin)
3. Test type: 96-hour flow-through
4. Organism: Mayfly nymph (*Hexagenia bilineata*)
5. Test Lab: Analytical Bio chemistry Laboratories Inc
Columbia, MO
6. Registrant: ICI and PMC
7. Report Date: September 9, 1980 (#23648)
8. Validation Category: Core
9. Abstract:

Accession No. 2-3505

A 96-hr flow-thru test was conducted with early instar mayfly nymphs. The test compound was ¹⁴C labelled permethrin. The test concentrations were measured by scintillation counting (not corrected for recovery*).

<u>Days Exposure</u>	<u>96-hr LC50 (ng/L ppt)</u> (measured values)	<u>N.O.E.L. (ng/L)</u>
24 hr 1	470 (350-1200)	97
2	330 (250-480)	97
3	160 (140-190)	45
96 hr 4	100 (85-120)	21

Dose Response Pattern

<u>ng/L</u>	<u>96-hr Mortality</u>
control	2/40
Solvent control	1/40
21	1/40
45	5/40
97	19/40
190	31/40
470	40/40

* Alan Forbis, Supervisor of Aquatic Studies at ABC Labs, was contacted regarding "recovery". He stated that spiked samples were counted and they indicated a 60-90% variability in recovery of the amount spiked. The measured water concentration values were not corrected for such recovery losses thus the reported LC50's may actually be somewhat higher than shown.

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